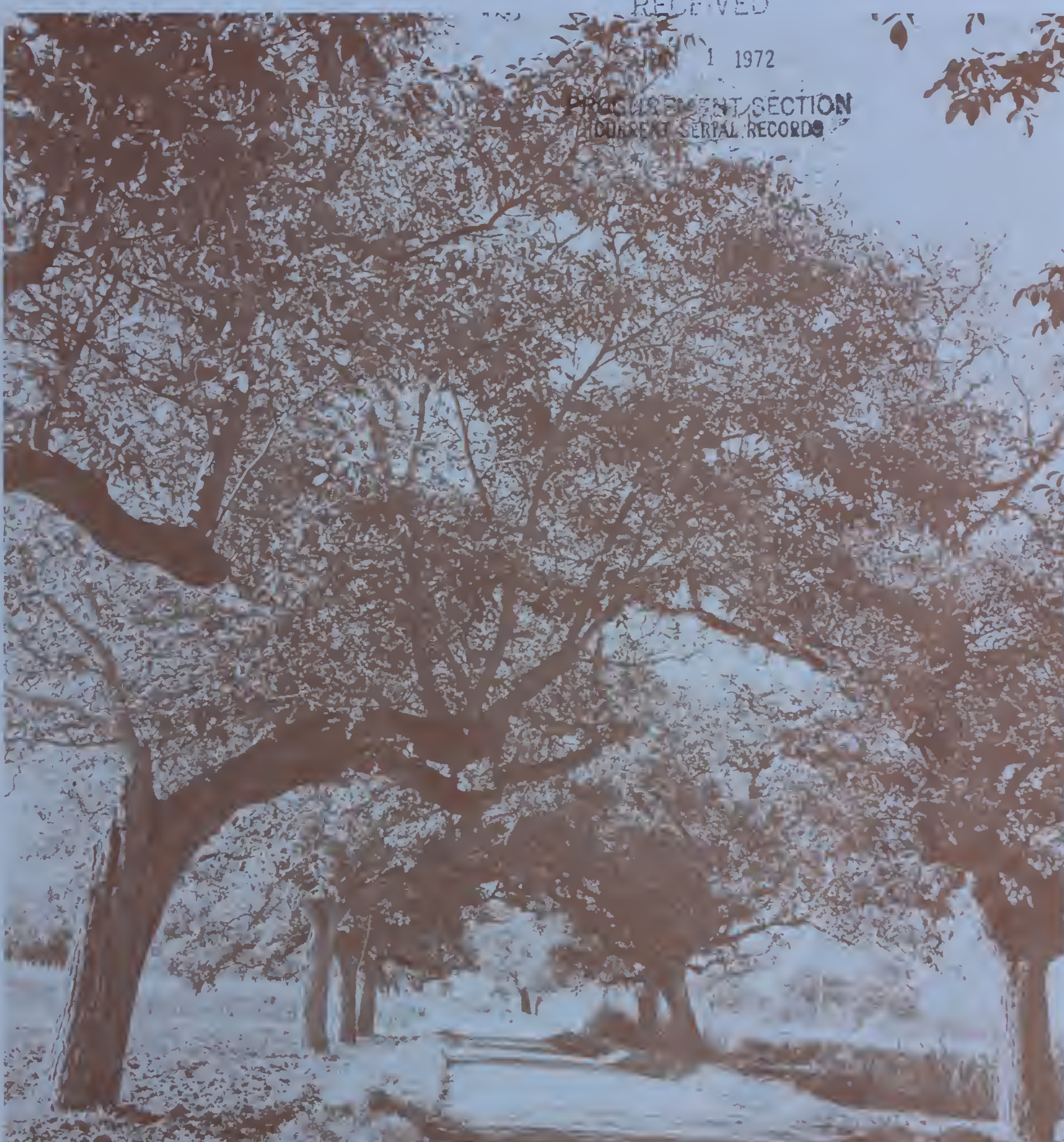
THE WALNUT INDUSTRIES of the MEDITERRANEAN BASIN



FAS M-245•U.S. DEPARTMENT OF AGRICULTURE•FOREIGN AGRICULTURAL SERVICE•APRIL 1972

COMMERCIAL WALNUT PRODUCING AREAS [1/]

1/ Walnuts are found throughout Turkey, there is no one area of commercial importance

FOREWORD

"The Walnut Industries of the Mediterranean Basin" is another in a continuing series of publications examining American competition in the international tree nut markets. Although long the world's leading walnut producer, the United States has not, until recently, ranked as a major world exporter. Over the past three seasons, however, the export market has become an extremely important outlet for the rapidly expanding American crop.

This survey examines the walnut industries of France, Italy, and Turkey in view of the changed competitive situation, as well as the potential competition to U.S. production and trade posed by these industries.

The author gratefully acknowledges the cooperation of the French, Italian, and Turkish Government officials, agricultural specialists, growers, and members of the processing industry, as well as the assistance of the U.S. Agricultural Attaché staffs in Paris, Rome, and Ankara.

J. W. Stewart, Director
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THE WALNUT INDUSTRIES of the MEDITERRANEAN BASIN

by Theodore Horoschak

Present Situation

Walnut production in the Mediterranean Basin—France, Italy, and Turkey—appears to have declined mildly in recent years, with output expected to stabilize at about present levels over the next 10 years. Simultaneously, France and Italy—heretofore the world's leading walnut exporters—have seen their top ranking vanish as adverse weather and low returns have led to tree removal in some areas. Competition from low-priced good-quality nuts from the United States and Mainland China also contributed to the decline. In the United States, foreign shipments, previously a minor market, have become an increasingly important outlet for the surging American production. And the Chinese have found walnuts to be an important foreign exchange earner in their expanding world trade.

French production, which demonstrated a mild upward trend during the late 1950's and early 1960's, has tended to stabilize in recent years. Output during the 1966-70 period averaged 29,000 short tons (inshell basis), as compared to 26,600 tons from 1961-65 and the 1956-60 average of 21,200 tons. Preliminary estimates place the 1971 harvest at 20,000 tons, severely reduced by anthracnose attacks in the Grenoble area and storm damage in the Bordeaux region.

French exports have shown a definite downward trend over the past decade. Industry members cite a combination of factors for the decline including:

- **Price**—French walnuts have been priced higher than nuts of comparable quality offered by the competition.
- **Tarnished product image**—A few processors have compromised the quality of their product by marketing mediocre blends when top quality nuts were unavailable. This does not apply to the renowned Grenoble walnuts, packaged under strict quality standards.
- **Inability to meet expanded foreign demand**—Fluctuation in crop size has undermined the importers' confidence in France's position as a dependable supplier.

A rising domestic consumption has helped to offset the lowered exports. Walnuts have traditionally been used in baked goods, and their use is expanding. In addition, a market is developing for consumer-size packets for out-of-hand eating.

Although demonstrating a mild downward trend during the early 1960's, Italian production appears to have stabilized in recent years, ranging from 20-25,000 tons. Preliminary estimates place the 1971 harvest at 23,000 tons. Virtually all production comes from small, scattered plantings usually having from three to five trees. Spread over 357,800 acres in 1961, scattered planting were found on only 242,900 acres in 1970. The high prices paid for walnut wood in recent years by lumber concerns account for a large percentage of this decline.

Confronted with declining output and an increasing domestic market, Italian exports dropped sharply during the 1960's. Although still an important outlet for the trade, foreign sales are further hindered by the practice of retaining top-quality nuts for the domestic market. In an effort to meet overseas demand for lower priced nuts, the Italian trade, upon request of an importer, will blend low-cost imported nuts with Italian walnuts. Industry members stated that to produce a homogeneous blend, they had to use nuts originating in Eastern Europe. Chinese walnuts are not used for blending due to their distinctive characteristics—thin shells and high oil content. In response to changing market conditions, Italian processors have expanded their package assortment. Today, walnuts are packaged to the individual customer's specifications, ranging from one-quarter kilogram cellophane wrappers to 100-kilogram burlap sacks.

Members of the trade in both France and Italy are alarmed by the sudden influx of low-priced, good-quality American and Chinese walnuts into what they

consider their traditional markets. Although no specific action has yet been taken, several industry representatives are advocating the establishment of minimum prices on all walnuts imported into the European Community (EC). Specifically, with regard to American sales, Mediterranean producers wonder if the United States is not simply 'dumping' surplus production onto the world market. The Europeans also believe that the American trade has overestimated the challenge presented by Chinese nuts. They feel that until the orientals can guarantee both quality and delivery date and expand their package variety, the Americans will be the European producers' major competition.

As members of the European Community, both Italy and France are exempt from the 8-percent customs duty on walnuts shipped to EC member nations: Belgium, Luxembourg, the Netherlands, and West Germany. In addition, the EC pays shippers a subsidy on walnuts exported to nonmember (third) countries. This subsidy is currently set at 3.62 cents per pound of inshell walnuts.

Although an associate member of the European Community, Turkey does not receive duty concessions on walnuts delivered to the member nations. Furthermore, Turkish shippers are not entitled to the subsidy paid on walnut shipments to third countries. In sharp contrast to France and Italy, Turkey has shown a strong upward trend in both production and exports over the past decade. Commercial production, accounting for less than 20 percent of the total output, averaged 9,400 tons from 1966-70 as com-

How Production Figures were Derived

The production statistics in this report are not the official figures published by the French, Italian, or Turkish Governments. The official figures cover total production, i.e., production in all Provinces (including those where walnuts are not of commercial significance, and output in commercially important areas that does not enter marketing channels).

The figures presented in this report are estimates of commercial production derived by the Foreign Agricultural Service. They are based upon estimates made by representatives of the walnut industries in France, Italy, Turkey, and other nations; reports prepared by the U.S. Agricultural Attaches and Foreign Service Officers stationed abroad; statistics prepared by the respective governments; and research performed by the Fruit and Vegetable Division of FAS.

Table 1.–Commercial walnut production in selected countries, selected average 1935 to 1966, annual 1956-71
[Inshell basis]

Year	France	India	Iran	Italy	Turkey	United States	Total
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Average:							
1935-39	38.3	—	--	16.5	8.0	56.7	--
1952-56	28.3	[1]8.9	6.3	23.2	5.3	73.5	145.5
1957-61	21.7	12.9	6.7	21.3	7.4	71.7	141.7
1962-66	29.2	14.6	4.0	24.8	7.4	85.9	165.9
Annual:							
1956	20.5	9.5	4.4	39.0	4.2	71.8	149.4
1957	9.5	14.0	7.4	13.0	3.5	66.6	114.0
1958	29.0	11.5	8.8	25.0	6.0	88.7	169.0
1959	18.6	9.0	8.5	22.0	7.3	62.7	128.1
1960	28.0	15.5	4.5	26.5	9.2	72.8	156.5
1961	29.4	14.7	4.2	20.0	10.8	67.5	137.6
1962	29.8	12.0	6.7	36.0	7.6	79.9	172.0
1963	31.0	13.0	3.5	22.0	7.0	83.1	159.6
1964	34.0	15.0	3.0	20.0	7.5	90.2	169.7
1965	18.0	15.0	4.0	27.0	8.0	80.3	152.3
1966	33.0	18.0	3.0	18.7	7.0	96.0	175.7
1967	27.0	12.0	4.0	25.0	8.0	76.4	152.4
1968	30.0	15.5	4.5	18.0	11.0	95.6	174.6
1969	25.0	11.0	5.5	20.0	10.0	105.5	177.0
1970[2]	30.0	15.5	4.5	22.0	11.0	111.8	194.8
1971[2]	20.0	12.0	4.0	23.0	9.0	125.1	193.1

[1] 4 - year average.
[2] Preliminary.

pared to the 1961-65 average of 8,200 tons. Preliminary data place 1971 commercial production at 9,000 tons. There is no specialized walnut acreage in Turkey, but rather small scattered plantings, comprised of three to five trees spread throughout the country. Tree numbers have increased mildly in recent years as farmers, encouraged by increasing prices, have planted additional units.

The Turkish people place a high value on walnuts as a basic food item, especially for winter consumption. Thus, in excess of 80 percent of total production is consumed by the farmers or sold locally, never entering broad commercial channels. As incomes have risen and the prople have migrated to the cities, commercial usage has expanded, primarily in the manufacture of pastry and confections.

Turkish exports during the 1970-71 season are estimated at 5,500 tons (inshell basis), approximately 20 percent above the 1961-65 average. Due to the trade's inability to guarantee the quality of inshell shipments, almost all overseas sales are of shelled walnuts. Though there are no established quality standards for exports, the industry understands the importance of a quality product; most firms have formulated their own standards or grades. Under the new Foreign Trade Regime, all overseas sales must be submitted to the Ministry of Foreign Economic Relations for review prior to being finalized.

Prospects

Commercial world walnut production should continue to expand at a rapid rate over the next decade, with harvests exceeding 240,000 short tons (inshell basis) by 1985. Almost all of this increase will be the result of surging U.S. production, the growth rate of which is expected to exceed 5 percent yearly into the late 1970's. This forecast does not include the Chinese crop, as production data for that nation are currently unavailable.

French production is expected to remain stable over the next 5 years with harvests averaging 27,500 short tons (inshell basis). However, in the long run, production will regain its upward movement as recent plantings in the Grenoble region reach bearing age. Lowered production in the Bordeaux area will offset any gains recorded in the Grenoble area in the near future. Unless the French trade revises its current pricing policy, exports will continue to fall in the face of increasing competition from American and Chinese nuts, although the high-quality Grenoble walnut should continue to sell well in luxury markets.

Italian production, at best, will remain static over the next decade. Faced with low economic returns for nuts and high timber prices, farmers will continue to remove walnut trees, switching to more lucrative crops. Output should average 22,000 tons over the next 10 years. Exports will continue to decline, as the domestic market continues its growth. And though the trade concedes that walnuts are decreasing in

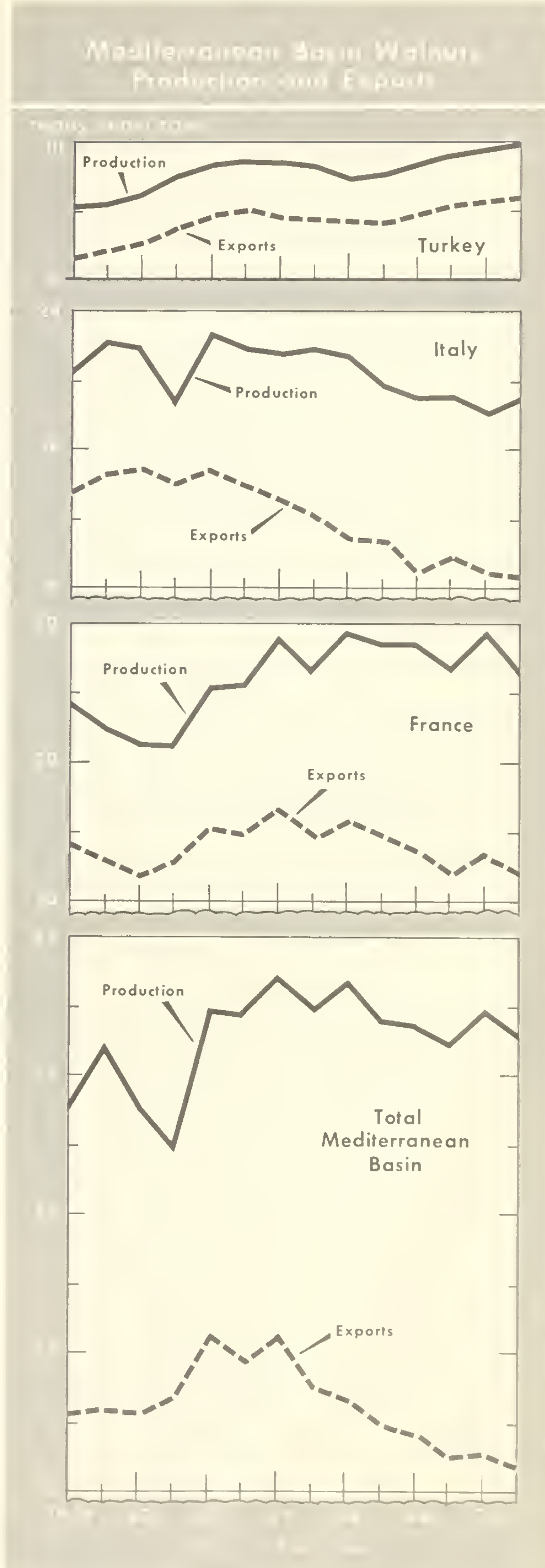

Table 2.—Walnut exports by selected countries, selected averages 1935 to 1961, annual 1956-70[1]
[Inshell basis]

Year	China[2]	France	India	Iran	Italy	Turkey	United States	Total
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Average:								
1936-39	8.9	9.3	--	2.0	7.0	6.8	4.7	--
1952-56	6.6	19.1	--	3.3	15.1	1.7	2.5	--
1957-61	7.1	12.6	11.9	2.8	15.3	3.4	2.5	55.6
Annual:								
1956	2.1	8.0	18.7	1.4	21.7	.6	2.1	50.6
1957	7.9	4.5	12.6	4.3	10.3	.1	4.9	44.6
1958	5.3	17.5	10.9	2.5	14.9	2.8	3.7	57.6
1959	8.7	9.5	6.7	3.4	15.3	3.4	1.2	48.2
1960	7.1	19.1	15.3	1.0	19.4	5.1	1.4	69.4
1961	6.6	12.1	14.0	3.0	16.4	5.7	1.3	59.1
1962	5.8	17.5	8.6	3.7	14.8	5.2	1.4	57.0
1963	8.0	16.0	9.2	1.8	10.1	3.4	1.7	50.2
1964	8.7	19.4	9.0	1.5	9.9	4.3	3.6	56.4
1965	15.5	8.2	6.1	2.0	14.4	4.7	5.0	55.9
1966	18.3	17.1	9.7	.9	8.4	3.5	5.1	63.0
1967	19.1	11.4	6.2	1.5	12.7	4.3	2.8	58.0
1968	19.4	10.3	10.4	.9	7.1	8.2	3.2	59.5
1969	14.9	12.0	4.9	.7	7.7	6.0	7.1	53.3
1970[3]	--	14.5	5.5	.7	7.5	5.5	10.4	--

[1] Marketing year beginning October 1 for France, India, Italy, Turkey, and the U.S.; September 23 for Iran for recent data. Prior to 1963 years vary somewhat.
[2] Official Chinese statistics are not available. Table based upon official trade data of importing countries.
[3] Preliminary.

Table 3.—Walnut exports[1],[2] from Mainland China, 1963-64 through 1969-70
[Inshell basis]

Country of destination	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Canada	7.0	7.7	10.8	9.0	8.6	7.6	6.3
Europe:							
EEC:							
France	--	--	--	.2	(3)	.5	.3
West Germany	.1	.3	.7	3.7	2.9	5.9	4.2
Netherlands	(3)	--	.1	.3	.5	.6	.4
Total EEC	.1	.3	.9	4.2	3.4	6.9	4.9
Switzerland	--	--	.1	.2	.2	.5	.3
United Kingdom	.9	.7	3.7	4.8	6.8	4.3	3.4
Total	8.0	8.7	15.5	18.3	19.1	19.4	14.9

[1] Official Chinese statistics are not available. Table based upon official trade data of importing countries.
[2] Totals may not equal sum of parts due to rounding.
[3] Less than 50 tons.

Table 4.—Walnut exports from the United States, average 1961-65, annual 1966-70

Country of destination	Year beginning October 1					
	Average 1961-65	1966	1967	1968	1969	1970
SHELLED						
Europe:	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
EEC:						
France	--	--	--	--	--	6
Netherlands	15	6	9	14	10	26
W. Germany	4	--	--	--	12	102
Total EEC	19	6	9	14	22	134
Norway	13	--	--	5	15	67
United Kingdom	7	21	9	--	22	40
Other	11	25	3	--	--	36
Total Europe	50	52	21	19	59	277
Latin America:						
Brazil	--	136	--	1	33	51
Venezuela	31	95	110	82	45	78
Other	47	60	69	213	99	44
Total Latin America	78	291	179	296	177	173
Other countries:						
Canada	37	105	24	41	1,190	576
Other	51	59	71	38	106	263
Total other countries	88	164	95	79	1,296	839
Grand total	216	509	295	394	1,532	1,289
INSHELL						
Europe:						
EEC:						
Belgium-Luxembourg	18	44	5	--	19	161
France	3	47	28	28	--	68
W. Germany	64	189	75	114	126	708
Netherlands	151	680	104	52	320	901
Total EEC	236	960	212	194	465	1,838
Denmark	34	128	14	50	201	311
Norway	116	338	128	252	189	313
Sweden	59	131	79	83	24	213
United Kingdom	161	349	22	11	187	1,064
Other	50	35	8	24	26	256
Total Europe	656	1,941	463	614	1,092	3,995
Latin America:						
Brazil	126	143	76	85	335	1,000
Mexico	44	51	40	49	80	130
Venezuela	62	115	85	84	108	235
Other	112	164	139	152	128	171
Total Latin America	344	473	340	370	651	1,536
Other countries:						
Canada	916	1,025	1,085	1,136	1,278	1,295
Other	118	357	209	95	179	285
Total other countries	1,034	1,382	1,294	1,231	1,457	1,580
Grand total	2,034	3,796	2,097	2,215	3,200	7,111

importance, Italy will continue to challenge the other exporting nations for a share of the market.

Conversely, Turkish production will continue to show a mild growth rate. Commercial production should average 10,000 tons over the next five seasons, as overseas sales and domestic commercial demand continue to expand. By offering a quality product at reasonable prices, the trade believes it will increase foreign deliveries. And when Turkey attains full membership in the European Community, the trade feels its competitive position in that important walnut market will be enhanced by exemption from the 8 percent customs duty Turkey now pays. Turkey's first intensive walnut groves will be planted during the next 2 years on a trial basis. It will take 8 to 12 years to bring this acreage into production.

The Walnut Industry of France

Production And Acreage

While walnuts are grown throughout France, they are of commercial importance in only two broad regions–Bordeaux in the southwest and Grenoble in the southeast. Production has stabilized in recent years, following a mild upward trend during the late 1950's and early 1960's. Harvests averaged 29,000 short tons (inshell basis) from 1966-70, approximately 9 percent above the 1961-65 average and 37 percent higher then the 1956-60 average. Preliminary estimates place the 1971 harvest at 20,000 tons, severely reduced by storm damage in the Bordeaux region and anthracnose attacks in the Grenoble area.

The Bordeaux region accounts for 65 to 70 percent of France's commercial harvest. Centered in Perigueux, some 50 miles east of the seaport of Bordeaux, this region includes the Departments of Charente, Correze, Dordogne, and Lot. To the majority of the farmers in this region, walnuts are considered a "gift" crop–one for which the production costs (in terms of time, money, and labor) are low. Trees are planted alongside highways, next to homes, and in the middle of fields. In 1969, specialized acreage totaled less then 2,650 acres, while scattered plantings were found on more than 31,400 acres. Although a few farmers have planted orchards, the majority of all specialized acreage has been financed by professional persons investing in agricultural projects to take advantage of the tax benefits.

Although specialized acreage will continue to expand, production in this region is expected to remain constant over the next 5 to 7 years. High prices paid by lumber concerns will continue to encourage many farmers to sell trees, and few of the trees destroyed during the severe storm in August 1971 will be replaced.

The Grenoble producing region follows the Isére River through the foothills of the Alps, almost due east to Bordeaux. With boundaries defined by legal decree, this area is comprised of portions of the Departments of Isere, Drome, and Savoie. It is centered around the towns of Tullins, Vinay, St. Marcellin, and Romanus-sur-Isere, with the city of Grenoble itself having little association with the walnut industry.

In direct contrast to Bordeaux, Grenoble producers depend upon walnut sales for the bulk of their income (usual range 40 to 60 percent). Plantings are generally specialized although the average orchard is small having less than 35 acres. In 1969, specialized acreage (farmland devoted to the production of a single crop) totaled just over 14,400 acres while scattered plantings were found on less than 6,250 acres. In June 1938 the trademark NOIX DE GRENOBLE was established by legal decree. Only walnuts of the Franquette, Mayette, and Parisienne varieties produced in a legally defined area within the Grenoble region and meeting strict quality standards may bear this title. Generally, less than half of the eligible production earns the label.

NOIX DE GRENOBLE is considered by many to be the world's finest and, accordingly, receives a premium price. The trade has made known its intention to expand plantings, the goal being to double production of the famed Grenoble walnut. At present, it is very difficult to project actual plantings as growers are reviewing their plans in the face of changing world trade patterns. However, acreage should show an upward movement over the next decade, with expanded production in 6-10 years.

Varieties

Walnuts from the Grenoble area are considered outstanding for inshell sales. The three principal varieties are the Franquette (accounting for 50 percent of output), Mayette (30 percent), and Parisienne (20 percent).

Franquette.–The Franquette is elongated and pointed with a heavy, tightly sealed shell. Producers consider it to be an outstanding variety because of its resistence to frost and its good shipping qualities. Shell-out ranges from 41 to 47 percent. It has an excellent taste, and is very popular for use in confectionery products.

Mayette.–The Mayette has a broad flat base, tending to be more rounded than the Franquette. Its shell is thin and tends to split. Shell-out ranges from 42 to 50 percent. It is popular for out-of-hand eating.

Parisienne.–The Parisienne is rounded and slightly elongated. It does not bleach well during processing for inshell trade, and has the highest shell-out ratio of the three, ranging from 43 to 49 percent.

The four primary varieties grown in the southwest are the Franquette, the Marbot, the Corne du Perigord, and the Grandjean.

Franquette.–The Franquette, introduced only recently into the Bordeaux region, is popular in the specialized plantings in the valleys of Lot and Dordogne.

Marbote.–The Marbot is an early variety, usually the first to reach the market. It is round with good kernel quality. Although having a low shell-out ratio, Marbots are tightly sealed, and stand up well to rough handling during processing and shipping.

Corne du Perigord.–The Corne du Perigord is more elongated than the Marbot, and has a low shell-out ratio; however, it is a sturdy nut well adapted to handling and shipping. Although it has good kernel quality, the shell is difficult to crack by hand, lowering its appeal to the consumer.

Grandjean.–The Grandjean is used primarily as shelling stock; shell-out ratio averages 40 percent. It is not popular, as yields are low.

In the Bordeaux region one farmer recently introduced several early-bearing American varieties in an effort to obtain a variety capable of winning the early market. Although the 200-acre planting is still under evaluation, it appears that late frosts pose a serious problem.

Cultural Practices

Cultural practices differ sharply between the two regions. In the Bordeaux area, where farmers have traditionally held the belief that walnuts are a gift crop providing cash but involving little effort on the grower's part, trees were planted in locations unsuited for other crops, receiving little if any care. There has been only minimal usage of fertilizer and pesticides and almost no utilization of modern cultural techniques. In recent years, progressive managers have been hired to oversee the specialized acreage financed by absentee, professional owners. Trees in these plantings are bearing in 5 to 7 years, compared to the 10 to 12 years under traditional methods.

Grenoble producers have historically tested, evaluated, and adopted new cultural techniques. They have, for many years, sponsored research and cooperated with the National Institute for Agricultural Research in an effort to improve their production.

In specialized acreage, the soil is clean-cultivated and smoothed. There is little intercropping once the trees mature. Prior to that time, corn and/or tobacco may be planted between the rows. Due to adequate water tables in production areas, virtually no walnut acreage is irrigated. Use of commercial fertilizers has increased in recent years, as has spraying with commercial fungicides and insecticides.

In both regions, production is accomplished with a minimum of hired help. For small farms, the operator and his family provide the labor. On larger units, part-time employees might be hired during harvest and a few permanent field hands retained throughout the year.

The crop is harvested from mid-September to late October. In the Grenoble area, over 90 percent of the 1971 crop was gathered mechanically, while less than 10 percent of the Bordeaux crop was so harvested. Where mechanical harvesting is not practiced, the nuts are either knocked from the tree with a long stick or picked from the ground after ripening and falling on their own.

Table 5.–France's supply and distribution of walnuts,[1] average 1963-67, annual 1968-69 through 1971-72

[Inshell basis]

Item	Average 1963-67	1968-69	1969-70	1970-71	Preliminary 1971-72
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Beginning stocks (October 1)	--	--	--	--	--
Production	28.6	30.0	25.0	30.0	20.0
Imports	1.5	1.0	1.0	1.0	1.0
Total supply	30.1	31.0	26.0	31.0	21.0
Exports	14.4	10.3	12.0	14.5	11.0
Domestic disappearance	15.7	20.7	14.0	16.5	10.0
Ending stocks (September 30)	--	--	--	--	--
Total distribution	30.1	31.0	26.0	31.0	21.0

[1] Estimates of beginning stocks are not available; domestic consumption figures include changes in stocks.

Table 6.–French walnut production, selected years 1961-69[1,2]

[Inshell basis]

Region and Province	1961	1963	1965	1967	1969
	Short tons	*Short tons*	*Short tons*	*Short tons*	*Short tons*
Bordeaux:					
Aquitaine	6,700	8,400	5,100	9,100	11,200
Limousin	3,300	5,500	4,400	3,900	5,000
Midi-Pyrenees	4,400	7,400	3,700	4,600	5,100
Poitou-Charentes	2,800	3,600	2,500	1,500	2,000
Total Bordeaux	17,200	24,900	15,800	19,100	23,200
Grenoble:					
Rhone Alps	8,000	7,000	6,500	8,000	10,900
Other	3,400	7,300	4,100	5,600	4,900
Total France	28,600	39,200	26,400	32,700	39,000

[1] Official estimates, French Ministry of Agriculture.
[2] Sum of parts may not equal total due to rounding.

Processing and Marketing

After hulling, which most farmers do themselves, the nuts are cleaned and dried. Although generally dried in slat-floored, ventilated drying lofts located on the top floor of farm buildings, a small percentage of the harvest is sun-dried on trays. Following delivery to processors, they are recleaned, sized, and graded with the best nuts being selected for inshell shipment. Those nuts to be marketed inshell are bleached lightly, given a final grading and packaged. Although the majority of France's walnut crop is sold inshell, many processors have mechanized their shelling operations in an effort to stem rising costs and improve quality control.

Table 7.–French walnut acreage, selected years 1961-69

Region and Province	1961		1965		1967		1969	
	Special-ized	Mixed	Special-ized	Mixed	Special-ized	Mixed	Special-ized	Mixed
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*
Bordeaux:								
Aquitaine .	0.4	19.8	0.5	19.8	2.5	17.4	3.6	17.6
Limousin .	(1)	4.4	.1	4.4	.2	7.4	.4	7.4
Midi-Pyrenees .	.9	12.3	1.2	12.7	2.3	20.6	2.4	20.2
Poiteu-Charentes	.1	2.1	.2	2.2	.1	1.5	.2	1.3
Total Bordeaux	1.4	38.6	2.0	39.1	5.1	46.9	6.6	46.5
Grenoble:								
Rhone Alps	14.2	.9	11.0	5.7	14.3	6.0	15.4	6.2
Other	.8	10.0	.6	11.1	.7	7.6	.7	6.4
Total France .	16.5	49.5	13.6	55.9	20.1	60.5	22.7	60.4

[1] Less than 50 acres.

French Ministry of Agriculture.

In the Bordeaux area approximately 60 firms process and/or export walnuts, with 10 accounting for the large majority of sales. Historically, these firms have purchased raw nuts from producers on an individual basis, pitting one farmer against another in an attempt to obtain lower prices. Recently, growers established a number of marketing associations in an effort to enhance their bargaining position. Members commit their entire crop to the association which acts as their agent, entering into agreements with one or more processors. Fourteen such groups were active during the marketing season, handling in excess of 2,000 short tons (inshell basis). Other growers, desiring to market their own output, have formed several cooperatives. Although still in their infancy, it appears these co-ops will be successful.

In contrast, the Grenoble area is characterized by close cooperation between the processors, producers, and shippers. The trade recognized long ago that the Grenoble walnut was of outstanding quality, but that unity was necessary if maximum profits were to be realized. Working together, industry members have created an outstanding and strict quality control.

Less than 25 firms handle walnuts in the Grenoble area, with 8 handling virtually all exports and most domestic sales. A large cooperative, established in 1929, continues as a dominant factor, annually processing 20 percent of the Grenoble crop. In 1966 7 firms consolidated their operations in an effort to improve their marketing efficiency. Their operation is housed in a modern processing plant capable of handling 2,000 tons (inshell basis) annually. Price guidelines for the handlers are established each season prior to harvest based upon a market survey conducted by one of the trade associations composed of processors, farmers, and shippers.

The French trade was a forerunner in package innovation, offering cellophane and mesh-net consumer packs in the early 1950's. The industry has continued to review and update its package assortment with consumer-size tins of shelled walnuts among the recent additions.

Asked specifically if it blends low-cost foreign walnuts into its pack, the trade responded negatively. However, if a customer so requests, some packers will prepare a low-cost blend consisting entirely of French walnuts.

Government Policy

The Ministry of Agriculture, through the extension service, is currently sponsoring several research projects concerned with walnut cultivation and processing. In addition, other government agencies work with industry groups, disseminating technical and economic data and organizing field trips and study sessions.

As a charter member of the European Community, France is exempted from the 8 percent customs duty on walnuts imported by fellow Community members. In addition, French shippers are eligible for the subsidy of 3.62 cents per pound paid by the EC on all inshell walnuts exported to nonmember countries.

Foreign Trade

French exports have demonstrated a definite downward trend over the past decade, with high prices and a tarnished product image cited as primary reasons behind this decline. French walnuts have been priced higher than nuts of comparable quality offered by other world suppliers, and importers report that a few French processors have compromised the quality of their product by marketing mediocore blends at top prices when quality nuts were not available. This does not apply to the high-quality NOIX DE GRENOBLE. Shipments during the most recent 5-year period (1966-70) averaged 13,100 tons as compared to 14,600 in 1961-65. This downward trend is expected to continue during the 1970's, although not as pronounced as during the past decade.

Inshell shipments account for approximately 70 percent of French exports (inshell basis). Less than a quarter of the foreign sales are from the Grenoble region, the majority originating in the Bordeaux area. West Germany ranks as France's largest customer, followed by the United Kingdom, Switzerland, and Belgium-Luxembourg.

American and Chinese nuts provide much of the expanded competition France is facing on world markets. Industry members feel that until China expands its package assortment to include other than bulk shipments and is able to guarantee delivery, the United States will be France's major competition in the European market.

Table 8.–French walnut exports, average 1961-65, annual 1966-70

Country of destination	Year beginning October 1					
	Average 1961-65	1966	1967	1968	1969	1970
SHELLED						
Europe:	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
EEC:						
Belgium-Luxembourg	113	181	157	130	115	162
Netherlands. .	112	162	111	120	162	221
West Germany	279	355	359	364	382	631
Denmark	38	44	31	56	47	63
Norway	31	19	11	7	16	14
Sweden	78	74	42	41	31	17
Switzerland . . .	185	247	177	191	207	271
United Kingdom	775	636	438	514	452	354
Remainder Europe	13	0	8	1	0	0
Total Europe	1,624	1,718	1,334	1,424	1,412	1,733
United States . .	89	119	100	0	0	0
Other	77	38	32	18	21	21
Grand total. .	1,790	1,875	1,466	1,442	1,433	1,754
INSHELL						
Eurppe:						
EEC:						
Belgium-Luxembourg.	389	776	427	577	904	464
Netherlands . .	296	217	48	47	109	79
West Germany.	6,852	9,212	5,568	4,362	5,755	7,541
Italy	6	0	0	0	7	11
Denmark	245	198	279	263	237	224
Norway	321	212	201	277	224	161
Sweden	375	390	317	387	366	218
Switzerland . . .	651	1,010	681	586	627	880
United Kingdom	331	273	112	76	117	330
Remainder Europe.	55	20	32	4	17	11
Total Europe .	9,521	12,308	7,665	6,579	8,363	9,919
Other	645	70	53	68	57	215
Grand total. .	10,166	12,378	7,718	6,647	8,420	10,134

French Ministry of Commerce.

Domestic Consumption

In recent years, French consumption has shown a mild growth, which is expected to continue. Rising incomes and an improving standard of living are credited with stimulating consumer demand. In 1970, disposable per capita income totaled $2,025, nearly 38 percent above the 1966 level of $1,476.

Table 9.–French walnut imports, average 1961-65, annual 1966-70

Country of origin	[Year beginning January 1]					
	Average 1961-65	1966	1967	1968	1969	1970
SHELLED						
	Short tons	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
Italy	41	229	76	48	91	119
Turkey	0	43	0	0	1	2
West Germany . .	0	0	0	0	17	0
United States. . .	0	0	0	1	0	4
Other	4	6	3	11	3	0
Total	45	278	79	60	112	126
INSHELL						
China	0	152	42	477	323	0
Italy	478	113	1,072	129	217	297
India	12	133	42	125	9	0
United States. . .	0	51	29	32	12	26
Other	142	410	316	252	23	5
Total	632	859	1,501	1,015	584	328

French Ministry of Commerce.

Reliable data on domestic consumption are unavailable, as the trade does not release carry-over (stocks on hand) figures at the end of each season. However, consumption is thought to have averaged 16,000 tons over the 1966-70 period as compared to 12,000 tons during the 1960-65 period.

The pastry and confectionery industries are the largest users of walnuts. A substantial market for individual consumer-size packets for out-of-hand eating has been developed.

Table 10.–Export price quotations for French extra halves, f.o.b. origin, first of the month

Year	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.
	Cents per pound	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*
1960-61	108.0	114.3	99.1	92.7	91.4	76.2	74.3	68.6	63.5	62.2	63.5	62.2
1961-62	66.0	72.4	82.6	88.9	84.5	97.8	88.9	85.1	86.4	88.9	91.4	91.4
1962-63	92.7	94.0	82.6	82.6	81.3	74.9	69.2	69.2	68.6	68.6	67.9	69.9
1963-64	71.1	77.5	78.7	95.3	93.4	90.2	101.6	104.8	104.8	104.1	104.1	104.1
1964-65	108.0	108.0	103.5	100.3	82.6	78.7	78.7	82.6	78.7	77.5	76.2	79.4
1965-66	88.9	100.3	101.6	120.7	133.4	133.4	139.7	139.7	142.9	139.7	139.7	133.4
1966-67	133.4	133.4	133.4	101.6	86.4	95.3	95.3	97.2	92.7	92.1	91.4	101.6
1967-68	108.0	108.0	123.8	125.7	117.5	123.0	117.6	115.4	115.4	111.0	106.7	104.5
1968-69	104.5	108.9	113.8	130.6	123.6	130.6	125.2	119.7	114.3	108.9	108.9	103.4
1969-70	103.4	103.4	98.0	100.2	119.7	95.8	103.4	101.2	101.2	99.1	99.1	111.6
1970-71	111.6	111.6	117.0	119.7	103.4	87.1	92.5	94.7	95.8	97.8	123.0	125.2

Gill and Duffus, "Edible Tree Nut Statistics", July 1971.

The Walnut Industry of Italy

Production And Acreage

Although walnuts are produced throughout Italy, commercial production tends to be concentrated in the Campania region. This area, accounting for approximately 80 percent of Italy's commercial crop, is composed of five Provinces centered around the port city of Naples: Napoli, Avellino, Caserta, Salerno, and Benevento. Napoli is the most important Province, contributing 30-35 percent of the commercial harvest. An additional 10 percent of the commercial harvest is produced in the Piedmont region of northern Italy; the majority being harvested in the Provinces of Vercelli, Novara, and Cuneo located along the French-Italian border. The remainder, approximately 10 percent, is scattered throughout the country.

Production appears to have stabilized in recent years, following a mild downward trend during the late 1950's and early 1960's. Harvests for the most recent 5-year period (1966-70) averaged 20,700 short tons (inshell basis) as compared to the 1961-65 average of 25,000 tons. Preliminary estimates place the 1971 harvest at 23,000 tons. Industry sources express the belief that future production will at best be static, ranging between 20,000 and 25,000 tons annually. It is highly probable that a mild decline will occur as the trend towards reduced acreage continues.

There is very little specialized acreage within Italy; almost all production comes from scattered acreage located on small landholdings. Most farmers have at least one walnut tree on their land, the average being three to five trees. Over the past decade, specialized acreage has remained relatively constant, totaling 2,700 acres in 1970 verus 2,500 in 1961. However, official statistics show that scattered acreage fell sharply over the same time period: placed at 357,800 acres in 1961, it fell to 242,900 acres by 1970. Industry members believe that this downward trend will continue, stating that the money farmers receive for trees sold for lumber exceeds the value of the nuts produced.

A large number of trees has been sold to either lumber mills or exporters, being replaced by more profitable crops (such as citrus, grapes, and annual crops). During the fall of 1971, individual trees of average quality sold for $400, with prices exceeding $900 reportedly paid for outstanding specimens. One reason for this activity has been the increased demand for consumer items produced from walnut wood which has grown tremendously throughout Western Europe and particularly in the United Kingdom.

Varieties

Two varieties comprise the bulk of the commercial Italian walnut trade: Sorrento and Vesuvio. The Sorrento, a true variety, has a pleasing oval shape, with an excellent texture to its shell. In quality, its kernel is rated high, with outstanding flavor.

Sorrentos are produced exclusively in two districts of the Campania region: (1) a small area just north of Naples and (2) south of Naples extending into Salerno Province. Sorrentos produced in the southern district tend to have a lighter skin and be meatier than those from the north. An outstanding variety, Sorrentos are considered by many to be second only to the French Grenoble in quality. Due to their excellent appearance, Sorrentos are generally shipped inshell.

Vesuvio, or Partenope as it is often called, is not a true variety, but a trade designation for walnuts produced in the mountains. The production area includes all Italy, the name Vesuvio referring only to the area where these walnuts are processed. In the Campania region, this type is also referred to as "Correnti". Vesuvio walnuts are rounder than Sorrentos with an extremely hard shell. Because of their high percentage of light-skinned kernels, Vesuvio walnuts comprise the bulk of those sold as shelled walnuts. The shelling ratio for Vesuvios ranges from 35 to 40 percent. Both of these 'varieties' have excellent storage characteristics.

Cultural Practices

Due to the small size of individual landholdings, few Italian farmers are able to operate specialized walnut acreage. If the producer hopes to eke out a living, no land can be wasted as occurs for walnut production with a large area under the tree shaded by the heavy and high branching of walnut trees. Generally, a small number of young walnut trees are planted in a row, with surface crops planted between, generally legumes and occasionally grapes or citrus. As the walnuts grow and crowding becomes excessive, either the walnuts or the other plantings are thinned out.

Walnut trees receive little, if any, care. A few progressive growers are adopting advanced cultural techniques, although this tends to be confined to those with specialized or new acreage. There is virtually no irrigated acreage; water is extremely scarce, and irrigation is reserved for higher valued crops such as citrus, grapes, and annual vegetables.

Table 11.—Italian walnut acreage, production, and yield, 1961-70[1,2]

Year	Acreage			Production			Average yield	
	Mixed	Specialized	Total	Mixed	Specialized	Total	Mixed	Specialized
	1,000 acres	*1,000 acres*	*1,000 acres*	*Short tons*	*Short tons*	*Short tons*	*Short tons per acre*	*Short tons per acre*
1961.........	357.8	2.5	360.3	76,900	1,700	78,600	0.2	0.7
1962.........	338.3	2.2	340.5	70,750	1,500	72,200	.2	.6
1963.........	298.2	2.2	310.4	72,500	1,600	74,000	.2	.7
1964.........	282.7	2.2	284.9	65,200	1,300	66,500	.2	.6
1965.........	274.8	2.2	277.0	75,100	1,600	76,700	.3	.7
1966.........	271.1	2.2	273.3	75,900	1,700	77,600	.3	.8
1967.........	269.1	2.0	271.1	85,500	1,900	87,400	.3	.9
1968.........	264.1	2.5	266.6	87,200	2,200	89,400	.3	.8
1969.........	256.2	2.7	258.9	85,400	2,900	88,300	.3	1.1
1970.........	242.9	2.7	245.6	87,700	2,900	90,600	.4	1.1

1 Official estimates, Italian Central Institute of Statistics, Rome.
2 Totals may not equal sum of parts due to rounding.

Table 12.—Money-wage indexes, Italy, 1954-70

1953 = 100[1]

Year	Agricultural workers	Industry		Trade		Transport		Government clerks
		Workers	Clerks	Workers	Clerks	Workers	Clerks	
1954	104.2	103.7	103.9	102.2	102.7	101.2	--	100.2
1955	108.9	108.6	110.9	105.3	106.1	106.8	--	111.8
1956	113.7	114.9	118.4	112.8	115.1	113.6	--	120.0
1957	117.3	120.1	124.2	118.4	121.8	117.5	--	126.3
1958	123.3	126.4	130.5	125.1	128.6	122.4	--	126.3
1959	125.8	127.9	132.8	129.1	133.0	129.9	--	128.8
1960	127.0	133.9	138.4	132.6	137.0	130.4	--	131.3
1961	133.3	139.5	144.0	139.5	144.7	140.5	--	132.2
1962	153.3	155.2	157.2	148.2	154.4	157.1	--	155.1
1963	186.0	177.4	187.5	167.4	179.2	169.8	--	202.7
1964	212.7	208.4	213.9	188.1	204.5	200.2	--	212.5
1965	231.2	225.7	229.8	208.1	226.3	211.5	--	223.6
1966	245.2	234.0	238.5	215.9	236.8	217.3	--	235.1
1967	257.0	247.1	250.5	222.6	244.1	220.8	--	240.0
	1966 = 100[2]							
1967	109.2	105.0	105.1	102.7	102.7	102.3	102.4	101.8
1968	114.8	109.0	108.3	107.6	107.4	105.9	105.7	105.0
1969	127.2	117.0	113.9	113.2	113.3	111.3	110.7	108.8
1970	149.4	141.2	130.0	128.1	126.6	126.4	124.4	111.9

1 As elaborated by the U.S. Embassy from the original ISTAT base 1938 = 1. These indexes are based on minimum gross contractual rates. They do not include the 13th month pay (Christmas bonus), family allowances, overtime, and other nonrecurrent allowances; therefore, they do not represent de facto earnings of the categories of people under examination.

2 New ISTAT series starting January 1967. The new index differs from the old one chiefly because it reflects, inter alia, such changes – not affecting the "take home" pay – as may occur in the number of working hours, annual leave days, and holidays. Also, it includes the 13th month pay.

ISTAT, Italian Central Institute of Statistics.

Due to their high cost, commercial fertilizers are not applied to walnut plantings. However, manure is used by many producers. As regards spraying, the small size of most plantings makes the use of commercial preparations uneconomical. Pruning is performed at the discretion of the individual farmer, generally limited to removal of dead or diseased limbs. This accounts for the tall, majestic walnut trees found throughout the countryside. However, the high lumber prices received by farmers in recent years have encouraged them to sell their plantings. Today, because of their high lumber value, few of the fine old trees are left.

Table 13.—Italy's supply and distribution of walnuts, average 1963-67, annual 1968-69 through 1971-72

[Inshell basis]

Item	Average 1963-67	1968-69	1969-70	1970-71	Preliminary 1971-72
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Beginning stocks, (Oct. 1)	3.5	0.2	0.4	1.3	0.3
Production	22.5	18.0	20.0	22.0	23.0
Imports	--	1.7	.9	.5	.5
Total supply	26.0	19.9	21.3	23.8	23.8
Exports	11.1	7.1	7.7	7.5	8.0
Domestic disappearance	13.9	12.4	12.3	16.0	15.8
Ending stocks, (Sept. 30)	1.0	.4	1.3	.3	--
Total distribution	26.0	19.9	21.3	23.8	23.8

Harvest extends from mid-August until late October or early November depending upon weather conditions. Due to the small size of the holdings, mechanical harvesting is uneconomical in Italy. Nuts are knocked from the trees with a stick and gathered by hand. In the case of tall trees, a person will climb the tree and beat the branches with a stick. Generally, the farmers hull their own harvest.

Processing And Marketing

Agents for the packer-exporters and small processing plants vie for available supplies, purchasing directly from the farmers. Preharvest sales are rare, the farmers being wary of misjudging market conditions and selling their production for a low price. Inshell walnuts are delivered to the processors, most of them in the Naples area, in burlap bags graded according to size and variety. Following delivery the nuts are cleaned and again sorted by size; the principal size categories being 26-28 millimeters in diameter, over 28 millimeters, and occasionally, over 30 millimeters. Nuts less than 26 millimeters are

Table 14.—Italian walnut exports, average 1961-65, annual 1965-69

Country of destination	Year beginning October 1					
	Average 1961-65	1965	1966	1967	1968	1969
SHELLED						
	Short tons	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
United States	94	--	--	144	--	--
United Kingdom	9	45	--	35	--	74
West Germany	106	74	183	113	--	--
Other	490	491	352	325	309	353
Total	699	610	535	617	309	427
INSHELL						
Belgium-Luxembourg	277	740	768	807	558	837
West Germany	6,035	7,697	3,268	4,937	2,805	2,340
Poland	--	--	--	613	121	328
United Kingdom	1,325	809	560	801	--	115
Brazil	--	--	577	823	520	1,074
Other	3,777	4,410	1,854	3,148	2,351	1,974
Total	11,364	12,916	7,027	11,129	6,355	6,668

Italian Ministry of Commerce.

shelled or sold locally. After sizing, the nuts to be marketed inshell are bleached lightly, given a final grading, and packed. Automatic shellers have been purchased by several firms.

Responding to changing consumer demands, the Italian trade has expanded its package assortment in recent years. Walnuts, both shelled and inshell, are packaged in 50-kilogram burlap bags; 25-, 10-, and 5-kilogram polyethylene bags packed in cardboard boxes; and 1-, one-half, and one-quarter kilogram cellophane bags. Nuts are occasionally packaged in mesh-net bags, primarily for the local market.

As in the United States, Italian processors are remodeling their plants in an effort to offset rising processing and labor costs. In addition, small firms are merging their operations, an action that has already resulted in more efficient marketing through reduced competition. Approximately 20 large firms sell on the export market, with less than half of these accounting for the bulk of the overseas shipments. Numerous small firms supplement these exports entering the market as conditions warrant.

Government Policy

Italy, as a charter member of the European Community, is exempted from the customs duty on walnuts imported by fellow EC member nations. In addition, the EC pays shippers a subsidy on inshell walnuts exported to nonmember (third) countries. The Italian trade believes that the importance of this payment, established in February 1971, has been negligible, owing to the difficulty involved in collecting.

Foreign Trade

Overseas sales have declined sharply in recent years, both in volume and as a percentage of total output. However, the export market still ranks as an important outlet for commercial production. Expanded domestic consumption combined with decreasing output lie behind the lowered export volume. Industry representatives stated that they withhold the best nuts for the expanding domestic market. This trend is expected to continue.

West Germany is still Italy's most important overseas market, although sales have dropped sharply in recent years. One nation, Brazil, has shown tremendous promise as a growth market: Sales exceeded 1,000 tons (inshell basis) during the 1970-71 season, representing approximately 16 percent of total shipments. This compares to virtually no shipments to Brazil as recently as 1964.

Much of the increased competition has come from lower priced American and Chinese walnuts. However, industry personnel stated that until China can guarantee delivery dates and begins delivery in other

Table 15.–Italian walnut quotations, f.o.b. warehouse, Naples, 1965-70

[Inshell basis]

Year	Year average	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Cents per pound	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*
Sorrento's #1													
1965	60	66	56	55	53	56	56	59	58	60	68	65	69
1966	66	67	65	65	66	67	67	67	69	62	65	65	67
1967	66	72	66	69	69	65	70	66	57	60	62	65	65
1968	70	64	61	66	68	69	64	(1)	(1)	70	76	82	82
1969	77	82	78	74	78	78	75	75	69	72	84	81	78
1970	68	72	65	71	69	69	68	69	69	72	68	66	61
Correnti													
1965	54	55	49	52	49	52	54	56	52	57	60	58	53
1966	56	50	53	(1)	(1)	(1)	52	(1)	61	53	(1)	61	61
1967	54	58	(1)	53	52	48	51	56	(1)	57	45	60	56
1968	60	59	56	52	56	58	58	(1)	(1)	58	(1)	73	72
1969	66	72	69	65	64	67	56	61	63	62	73	69	65
1970	60	58	59	63	60	62	56	61	64	63	62	60	52

[1] Not available.

Italian Institute for Research and Information on Agricultural Markets and Prices.

than bulk packets, the United States will be the major factor in the international market. In an effort to lower prices, Italian dealers will blend a low-cost foreign product with the domestic crop if the purchaser so requests. Asked specifically as to what type nuts are mixed in with the Italian crop, industry members stated "if the blend is to be homogeneous, nuts from Eastern Europe and Turkey must be used. The characteristics of the Chinese walnuts are such as to prohibit their use."

Domestic Consumption

Domestic consumption has been rising in recent years, with increased income and rising standards of living credited with stimulating consumer demand. Disposable per capita income totaled $1,325 in 1970, more than double that recorded in 1961.

Although reliable data are not available, domestic consumption is believed to have averaged 13,000 short tons over the 1966-70 period. This compares to the 12,100 tons recorded from 1961-65 and 9,200 tons during the 1959-63 period. Growth is expected to continue, with domestic utilization totaling 15,000 tons during the 1971-72 season.

Out-of-hand eating and baked goods are the two primary outlets for walnuts in Italy. In recent years, a substantial market has been developed for consumer-size cello-packets of inshell walnuts. Industry members feel the domestic market to be of the utmost importance, marketing their finest quality product there.

The Walnut Industry of Turkey

Production And Acreage

Walnuts, grown throughout all Turkey, are a secondary crop considered to be self-sufficient, requiring little, if any, care. There is no "specialized" acreage; rather, a farmer will have from one to five trees scattered over his holdings. And, though acreage figures are not available, it is known that tree numbers have increased mildly in recent years, with farmers being encouraged to increase them by the rising prices paid for walnuts and other tree nuts. Several producers in the Izmir area recently began growing walnut seedlings and are considering planting walnut groves. If prices remain high, this expansion will result in a continuing growth in output over the next 10-15 years.

Since the mid-1950's, Turkish walnut production has demonstrated a definite upward trend. Official statistics place the 1970-71 harvest at 113,500 short tons (inshell basis), approximately 42 percent above the 1960-64 average. However, the majority of production is consumed at the farm level or in the local villages, never entering commercial channels; thus, the information of importance to world trade relates to the quantity of walnuts available for commercial utilization, not total output. Historically, commercial production has ranged from 10 to 20 percent of total production.

Table 16.–Turkey's supply and distribution of walnuts, average 1963-67, annual 1968-69 through 1971-72

[Inshell basis]

Item	Average 1963-67	1968/69	1969/70	1970/71	Preliminary 1971/72
	1,000 short tons	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Beginning stocks (October 1)	--	--	--	--	--
Production	7.5	11.0	10.0	11.0	9.0
Total supply	7.5	11.0	10.0	11.0	9.0
Exports	4.0	8.2	6.0	5.5	5.0
Domestic disappearance	3.5	2.8	4.0	5.5	4.0
Ending stocks (September 30)	--	--	--	--	--
Total distribution	7.5	11.0	10.0	11.0	9.0

Commercial production has also demonstrated a mild upward trend in recent years. Output hit a record 11,000 tons in both 1968 and 1970, averaging 9,400 tons during the 1966-70 period. This compares to the 7,400 tons averaged in 1957-61. Preliminary data place the 1971 harvest at 9,000 tons. Expanded tree numbers and, to a small extent, improved cultural practices have contributed to the enlarged harvests and will help bring about further expansion.

As might be expected with widely scattered production, sharp differences of opinion arise as to where the best quality nuts are produced. It seems that each firm involved in the walnut trade obtains its supplies from a different production area, and believes its choice to be the best.

As in Italy and France, some old trees are being cut for lumber export. However, this is not widespread, as an Extension Service permit is required before any trees can be cut down. Legally, only diseased or old unproductive trees can be removed. Thus, cutting of trees is expected to have no effect on output.

One interesting sidelight is that, although walnuts are inevitably considered a secondary crop, landowners retain the right to harvest all walnuts produced on land they lease to farmers.

Cultural Practices

Through the years, and even today, the Turkish farmers' attitude that walnuts are a "gift" crop has been a major factor underlying the lack of attention paid to this crop. There is little, if any, pruning, with trees commonly exceeding 40 feet in height. Irrigation of walnuts is unheard of, as is the use of commercial fertilizers.

Due to the small size of holdings, the use of insecticides and fungicides on walnuts has proved to be uneconomical. However, the Turkish Government, encouraged by increasing prices for tree nuts on world markets, recently initiated a spraying program for chestnuts in an effort to control worm damage. Although offering only technical assistance, the Extension Service plans to expand this program shortly to include walnuts.

Harvesting extends from early September until late October or nearly November. Mechanical harvesting is unheard of due to the high cost of machinery and the small number of trees owned by individual farmers. Nuts are either knocked from the trees with a stick and gathered by hand or allowed to ripen on the tree, being picked up off the ground after falling from the tree. In the case of tall trees, a person might climb the tree and beat the branches with a stick. Generally, farmers hull their own crops.

Processing And Marketing

Turkey's commercial walnut trade is centered in the Aegean seaport of Izmir. Most firms handle a large number of commodities, with walnuts of minor importance. Because of the low volume and expense involved in storage, dealers do not maintain stocks. Rather, the individual firms will hire fieldmen or brokers to keep them informed as to quality, size, and projected harvest dates of the forthcoming crop. Based on this information, the firms contract forward sales, purchasing the required stock through their brokers or fieldmen. Although both shelled and inshell walnuts are shipped, the trade cannot guarantee the quality of inshell shipments. Thus, shipments are primarily comprised of shelled walnuts.

Following harvest, the farmers distribute walnuts to villagers who shell them by hand in their homes. In general, the shelling ratio ranges from 30-40 percent, depending upon how carefully the nuts are handled. Following shelling, the kernels are delivered to Izmir, either by the farmer personally or the firm's agent. Upon receipt, the firm will sort, grade, and package the kernels for shipment. Although there are no established quality standards for Turkish walnuts, the trade realizes the importance of a quality product and most firms have formulated their own standards.

Over the past 5 years, the farmers have received from 27 to 37 cents per pound (kernel basis), with prices during the 1971-72 season expected to range between 35 and 39 cents per pound. Several members of the trade expressed the belief that if the demand of the commercial market continue to strengthen, the percentage of nuts sold in export would expand.

Government Policy

Turkey, although an associate member of the European Community, receives no duty concessions on walnuts shipped to Member nations. Thus, shipments of both shelled and inshell walnuts are subject to the 8-percent duty established by the EC.

A firm, to be eligible to export, must belong to the Exporter's Association. Previously, the Exporter's Association reviewed all overseas sales and possessed the authority to terminate the sales agreement if the price was considered too low. However, under the new Foreign Trade Regime, all foreign sales are subject to government price controls.

The procedure is as follows:

To be eligible to ship overseas, a business firm must join the Exporter's Association. Previously, this association reviewed all foreign sales, possessing the authority to terminate a sales agreement if the contract price was considered low. Today, under the new trade regime, all overseas sales are subject to governmental price control. The basic object of this procedure is to ensure that foreign exchange earnings are deposited in the Central Bank. One major complaint has been the delay created by the increased paperwork required for export transactions. In an effort to expedite the process, the Ministry of Commerce established an office in Izmir which has the authority to administer the price controls.

Shippers have criticized the new procedure claiming that foreign buyers find it difficult to transact business not knowing what the contract price will be. In addition, it is extremely difficult for a government organization to establish reasonable price differential for the various grades of minor commodities (with reference to walnuts—bits and pieces, brokens, light halves, etc.).

Foreign Trade

Overseas sales, although only a fraction of the total Turkish output, represent a major outlet for the commercial yield. Exports have demonstrated a mild upward trend over the past 15 years which is expected to continue. Shipments for the 1969-70 season totaled 6,000 short tons (inshell basis) well above the 4,700 tons averaged during the 1959-63 period.

Western Europe, with its expanding markets, has become an increasingly important customer for Turkish walnuts. Accounting for less than 40 percent of Turkey's foreign deliveries (inshell basis) during the 1962-64 period, Western European nations took in excess of 55 percent over the three most recent seasons (1967-69). Austria, Switzerland, West Germany, and the United Kingdom rank as the most important markets, with Israel rapidly developing as a major customer.

Inshell shipments represent approximately 15 percent of Turkey's export volume. As mentioned earlier, the inconsistent and poor quality of inshell shipments has made both buyers and sellers leery of inshell shipments. In recent years, Italy and West Germany ranked as primary outlets for inshell nuts.

Domestic Consumption

It is impossible to accurately determine Turkey's domestic consumption of walnuts. Valued as a basic food item, the majority of the production is consumed without entering normal marketing channels, sold by the farmer to the local populace or utilized by the producer and his family. However, an examination of domestic commercial consumption reveals a mild upward trend—primarily in the manufacture of pastry and confections.

Placed at an average of 3,400 tons over the 1963-67 period, domestic consumption is estimated

at 5,500 tons for the 1970-71 season. An improving standard of living and a slowly rising income are credited with stimulating consumer demand. In 1970, disposable per capita income totaled $200, approximately 48 percent above the 1961 level. A further stimulus to demand has been the steady influx of Turkish workers returning from good paying jobs in West European nations.

Table 17.–Turkish walnut exports, average 1961-65, annual 1965-69

Country of destination	Year beginning October 1					
	Average 1961-65	1965	1966	1967	1968	1969
SHELLED	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
United States	491	265	218	624	935	26
United Kingdom .	258	390	209	311	572	599
West Germany ...	35	53	4	25	185	24
Austria	171	151	117	211	319	263
Israel	32	91	41	38	123	204
Lebanon	139	164	252	4	67	156
Jordan	55	108	36	2	95	156
Other	240	311	324	241	522	530
Total........	1,421	1,533	1,201	1,456	2,818	1,958
INSHELL						
United States	1	--	--	--	16	--
Austria	91	94	55	52	164	86
Italy	109	22	--	2	363	436
West Germany ...	511	161	132	59	310	283
Lebanon.........	55	40	75	--	11	97
Syria	88	237	209	--	8	21
Other	232	262	85	528	294	220
Total........	1,087	816	556	641	1,166	1,143

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